Maine Woods Pellet Company, LLC
Somerset County
Athens, Maine
A-989-71-D-R/M (SM)

Departmental
Findings of Fact and Order
Air Emission License
Renewal and Minor Revision

FINDINGS OF FACT

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Maine Woods Pellet Company, LLC (MWP) has applied to renew their Air Emission License permitting the operation of emission sources associated with their wood pellet manufacturing facility.

MWP has also requested a minor revision to their license to adjust the maximum capacity of Dryer #1 from 50 MMBtu/hr to 45 MMBtu/hr.

The equipment addressed in this license is located at 164 Harmony Road, Athens, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Production Rate (ODT/hr)	Fuel Type	Install. Date	Stack #
Dryer #1	45	14.4	wood (95%) & propane (5%)	2008	1

Process Equipment

Equipment	Pollution Control Equipment	Stack #
Dryer Cyclone	Wet Scrubber	1
Milled Material Cyclone	Baghouse	2
Dust Recovery Cyclone	Baghouse	2

C. Application Classification

The application for MWP does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). With the annual hours of operation limit on the dryer, the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Process Description

The wood pellet process begins with hardwood and softwood chips being fed from hoppers through the chip hammermill to reduce them to a size more appropriate for drying. The milled chips are then fed into the dryer where they go from approximately 50% moisture down to approximately 10% moisture. The Dryer is fueled with dried wood using a small amount of LP Gas as a flame stabilizer. From the dryer, the material moves to the Dryer Cyclone where the

material is separated from the air flow. The exhaust passes through a Ducon wet scrubber before being vented to the atmosphere.

The acceptable material proceeds through a second hammermill to the Milled Material Cyclone. The exhaust from the Milled Material Cyclone is sent through a baghouse before being vented to the atmosphere.

After the Milled Material Cyclone, a portion of the dry wood product is taken to be used as fuel in the dryer. The remainder is sent to four pellet mills where they are processed into wood pellets. Finished pellets are cooled and screened to remove dust. This dust is moved to a storage bin where it is used as fuel in the dryer. The finished product then proceeds to be bagged or loaded for bulk distribution. The pellet mill and the bagging and distribution areas are controlled for dust using the Dust Collection Cyclone. The material collected from this cyclone is sent to the dryer as fuel. The exhaust is sent through the same baghouse as the Milled Materials Cyclone exhaust.

C. Dryer #1

The burner for Dryer #1 has a rated maximum heat input capacity of 45 MMBtu/hr. The dryer burner fires primarily (95%) wood dried to 10% moisture. The dryer also fires a small amount of propane (5%) as a flame stabilizer. The exhaust from Dryer #1 flows through the Dryer Cyclone and then the exhaust from the cyclone flows through a Ducon wet scrubber (95% control efficiency) before being vented to the atmosphere.

Dryer #1 is not subject to the New Source Performance Standards (NSPS) titled *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 CFR Part 60, Subpart Dc. These standards apply to steam generating units with a heat input capacity between 10-100 MMBtu/hr and are constructed after June 9, 1989.

The term "steam generating unit," as defined in Subpart Dc, does not include process heaters. The USEPA has concluded that direct contact heat operations are not subject to the requirements of NSPS Subpart Dc.

Dryer #1 is not subject to *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources,* 40 CFR Part 63, Subpart JJJJJJ. Dryer #1 does not meet the definition of a boiler as described in this subpart.

1. BPT Findings

MWP is subject to *General Process Source Particulate Emission Standard,* 06-096 CMR 105 (as amended) which regulates PM emissions from the wet

scrubber stack. However, a site specific PM emission limit of 8.5 lb/hr was determined to meet BACT in air emission license A-989-71-B-A, is more stringent, and shall be used.

Emission limits (lb/hr) for SO_2, NO_x, and CO are based on testing data provided by the manufacturer. These limits were determined to meet BACT in air emission license A-989-71-A-N and shall be used.

The VOC emission limit (lb/hr) is based on other units of similar size and age. This limit was determined to meet BACT in air emission license A-989-71-B-A and shall be used.

The BPT emission limits for Dryer #1 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Dryer #1	8.5	8.5	5.1	5.0	15.1	12.5

Visible emissions from the wet scrubber shall not exceed 20% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block average in a 3 hour period.

Operation of Dryer #1 shall be limited to 7,950 operating hours per year on a 12-month rolling total basis.

2. Periodic Monitoring

Periodic monitoring for Dryer #1 shall include recordkeeping to document hours of use, both on a monthly and 12 month rolling total basis.

Periodic monitoring shall also include records of maintenance and downtime for the wet scrubber.

D. Milled Material Cyclone and Dust Recovery Cyclone

The Milled Material Cyclone separates the dried material from the milled material air flow. The Dust Recovery Cyclone collects fugitive dust from the pellet processing, bagging, and bulk distribution operations, and delivers the collected material to the Dryer as fuel. Both cyclones vent to a single baghouse which is rated at 99% control efficiency. The baghouse is considered BPT for the control of PM and PM_{10} from the Milled Material and Dust Recovery Cyclones.

The PM emission limit from the baghouse is based on manufacturer supplied emission rates from the cyclones and the baghouse rated control efficiency.

Visible emissions from the baghouse shall not exceed 10% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. MWP shall take corrective action if visible emissions from the baghouse exceed 5% opacity.

E. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour.

F. General Process Emissions

Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

G. Annual Emissions

1. Total Annual Emissions
MWP shall be restricted to the following annual emissions, based on a 12 month rolling total. The tons per year limits were calculated based on operation of Dryer #1 at full capacity for 7,950 hours/year and operation of the cyclone baghouse for 7,950 hours/year.

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Dryer #1	33.8	33.8	20.3	19.9	60.0	49.7
Cyclone Baghouse	2.0	2.0	–	–	–	–
Total TPY	**35.8**	**35.8**	**20.3**	**19.9**	**60.0**	**49.7**

2. Greenhouse Gases
Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans,* 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO_2e).

Based on the facility's fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, MWP is below the major source threshold of 100,000 tons of CO_2e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

III. AMBIENT AIR QUALITY ANALYSIS

MWP previously submitted an ambient air quality impact analysis for air emission license A-989-71-B-A (dated 3/15/10) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate Ambient Air Quality Standards (AAQS). An additional air quality impact analysis is not required for this renewal.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-989-71-D-R/M subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
2. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

C. submit a written report to the Department within thirty (30) days from date of test completion.

[06-096 CMR 115]

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) **Dryer #1**

A. MWP shall combust only wood and propane in Dryer #1. [06-096 CMR 115, BPT]

B. Dryer #1 shall not exceed 7,950 operating hours per year based on a 12-month rolling total. A written log of all operating time shall be kept on a monthly and 12-month rolling total documenting all operating hours. [06-096 CMR 115, BPT]

C. MWP shall keep records from the supplier documenting quantity of propane delivered on a monthly and 12-month rolling total basis. [06-096 CMR 115, BPT]

D. MWP shall keep records of all maintenance and downtime for the wet scrubber. [06-096 CMR 115, BPT]

E. MWP shall operate the dryer cyclone and wet scrubber whenever Dryer #1 is in operation. [06-096 CMR 115, BPT]

F. Emissions from Dryer #1 shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Dryer #1	8.5	8.5	5.1	5.0	15.1	12.5

G. Visible emissions from the wet scrubber exhaust stack shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

H. A monthly inspection shall be conducted for the dryer cyclone and wet scrubber. Records of all maintenance performed on the dryer cyclone and wet scrubber shall be kept. [06-096 CMR 115, BPT]

I. MWP shall test the wet scrubber exhaust stack for PM once every three years (with the next test completed by 12/31/15) to demonstrate compliance with the licensed emission limit. If MWP fails a stack test, MWP shall resume testing annually until compliance is demonstrated for three consecutive years before returning to testing once every three years. [06-096 CMR 115, BPT]

(17) **Milled Material Cyclone and Dust Recovery Cyclone**

A. The Milled Material Cyclone and Dust Recovery Cyclone shall vent to a baghouse for PM control. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/hr	Origin and Authority
Baghouse	PM	0.5	06-096 CMR 115, BPT

C. Visible emissions from the baghouse shall not exceed 10% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. MWP shall take corrective action if visible emissions from the baghouse exceed 5% opacity. [06-096 CMR 101]

D. A monthly inspection shall be conducted for each cyclone and baghouse. MWP shall keep records of all maintenance and downtime for the cyclones and baghouse. [06-096 CMR 115, BPT]

(18) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

(19) **General Process Sources**
Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(20) **Annual Emission Statement**
In accordance with *Emission Statements*, 06-096 CMR 137 (as amended), the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of either:

1) A computer program and accompanying instructions supplied by the Department; or
2) A written emission statement containing the information required in 06-096 CMR 137.

The emission statement must be submitted as specified by the date in 06-096 CMR 137.

(21) MWP shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 4 DAY OF June , 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PATRICIA W. AHO, COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 MRSA §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 10/4/12
Date of application acceptance: 5/16/13

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Poland, Bureau of Air Quality.

Filed
JUN 5 2013
State of Maine
Board of Environmental Protection